A Comparative Study on the Meaning in Life of Patients with Cancer and Their Family Members

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ABSTRACT

Introduction: The overwhelming effects of cancer could be catastrophic for the patients and their family members, putting them at risk of experiencing uncertainty, loss, and an interruption in life. Also, it can influence their sense of meaning, a fundamental need equated with the purpose in life. Accordingly, this study aimed to compare the meaning in life (MiL) of patients with cancer and their family members.
Methods: This descriptive comparative study was conducted on 400 patients with cancer and their family members admitted to university hospitals in Tabriz and Ardebil provinces, Iran. The participants were sampled conveniently and the Life Evaluation Questionnaire (LEQ) were used for collecting data analyzed through descriptive and inferential statistics in SPSS ver. 13 Software.
Results: The mean score for the MiL of the patients with cancer and their family members was 119 (16.92) and 146.2 (17.07), respectively. There was a significant difference between patients with cancer and their family members in terms of MiL.
Conclusion: The MiL of patients with cancer is lower than that of their family members, which indicates the need for further attention to the psychological processes and their modification in Iranian healthcare systems.

Introduction

Cancer is one of the leading causes of morbidity and mortality worldwide, with approximately 14 million new cases and 8.2 million cancer-related deaths in 2012.[1] The estimated number of new cases of cancer each year is expected to rise from 11 million in 2002 to 16 million by 2020 in both developed and developing countries[2] and by 2030, an estimated 70% of all cancers will be diagnosed in adults aged 65 years or older.[3] Also, it is a major health problem in Iran and according to recent statistics issued by the Iran Ministry of Health, cancer is the third leading cause of death after cardiovascular diseases and road traffic accidents.[4] An earlier study also estimated the incidence of cancer in different regions of Iran to be 134 and 121 in 100000 people, in men and women, respectively. Moreover, the incidence of cancer is expected to increase dramatically in the next decade due to the increasing life expectancy and aging of the population.[5]

The primary goal of care in patients with cancer as with other chronic diseases is essentially to optimize the quality of life (QOL) that it seems the meaning in life (MiL) and understanding the truth of life is one of the factors which greatly affects QOL.[6] Although multiple definitions of MiL have been proposed, this multidimensional construct is broadly conceptualized as a set

of beliefs that bring coherence to the world and purpose to one's own life[7] and is generally defined as a person's subjective feelings of meaningfulness, including a sense of purpose or direction, comprehension of life's circumstance, and significance.[8]

It was introduced by the theoretical work of the Austrian psychiatrist Viktor Frankl who had a personal history as a survivor of the Nazi concentration camps.

He defines ''meaning'' as the manifestation of values based on creativity, experience and attitude. His logo therapy draws on one of his well-known statements that humans are able to cope with any suffering if they are able to find meaning in it.[9] This is of particular relevance to clinical and healthcare settings, especially with regard to patients suffering from severe illnesses or those facing the end of their lives,[10] take cancer, for instance, which can challenge the patients' experience of MiL and imply many uncertainties (e.g. about death, recurrence of the illness), being accompanied by a variety of losses (e.g. health, job, friends, naturalness of life).[11]

LeMay and Wilson declared "meaning" is one of the major concerns, and could be extremely distressing for patients at the end of life and, if left unattended, might threaten the patients' psychosocial well-being and QOL, increase their level of anxiety, depression, and suicidal tendency, as well as lowering their desire to live.[12] Researchers also have suggested that MiL should be included in assessments and interventions for the patients with advanced-stage cancer.[13]

Also, a number of empirical studies have identified MiL as typically having a goal or a sense of unified purpose, which has an important role in the maintenance and enhancement of physical, psychological, and mental health.[14-16] A review of literature differentiates between meaning as the comprehension of an adverse event and the reasons why it has taken place, which is typical of the first stage of the experience, and meaning as the significance of the philosophical and spiritual implications, as

well as the existential consequences of the traumatic experience, typical of later stages.[17] Although both are right, the second meaning is focused on in the present study, which is thought to be acquired through interpersonal relationships and culture.[8]

Studies have shown that seeking and fulfilling MiL in patients with cancer and their family members acts as a significant protective factor against emotional instability, ensuring their psychological health and well-being.[18,19] Also, comparing MiL of patients with cancer and their family members could assist healthcare professionals in understanding and planning appropriate healthcare services. Despite the obvious importance of enhancing a sense of meaning in patients with cancer and their family members and raising the awareness of the Iranian healthcare professionals of the need for spiritual and palliative care, few studies have been conducted to address this critical issue in Iranian context. A thorough understanding of such comparisons could prove critical for the healthcare professionals to provide appropriate care for patients with cancer and their family members. Therefore, this study aimed to compare the MiL of patients with cancer and their family members in Iranian context.

Materials and methods

This descriptive comparative study was conducted in hematology-oncology university hospitals of Tabriz and Ardebil, two provinces in northwest of Iran from April to June 2015. The study population included all patients and their family members who had referred to these centers during the study period. The inclusion criteria for the participants were: (a) having a confirmed cancer diagnosis for themselves or their family members; (b) being at least 18 years old; (c) willing to participate in the study; (d) having had at least 3 months pass since their diagnosis, and (f) the ability for verbal communication. The participants were excluded from the study if they had a chronic disease other than cancer (e.g.

Diabetes, COPD, etc.), experienced significant worsening of their disease and were transferred to the intensive care unit, were diagnosed with a mental illness, or decided to leave the study.

The sample size was calculated based on a pilot study of 40 patients with cancer and their family members. In the G*Power 3.1.2 software, a two-tailed test to compare the mean of MiL of patients with cancer and their family members (two independent groups) were used with the following input parameters (an alpha level a priori at .05 (error of 5%), effect size (d) at 0.285, power at 0.8 and ratio between the two groups of participants at 1). On this basis, 390 participants were estimated to be needed in this study. However, considering the potential attrition rate and uncompleted questionnaire, a convenience sample of 430 patients with cancer and their family members were invited to participate in the study based on the recommendation of the review board. Overall, a total of 400 subjects of eligible participants (200 patients with cancer and 200 of their family members) completed and returned the distributed questionnaires (response rate = 93%).

A two-part questionnaire was used for collecting data. The first part included demographic data and the second part was Life Evaluation Questionnaire (LEQ)–a multidimensional nomothetic meaning in life instrument – developed by Salmon et al., (1996) which consisted of 44 items in five subscales: freedom versus restriction,[10] appreciation of life,[5] contentment,[8] resent-ment,[13] social integration.[8] Each item was classified according to a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The sum of each subject's scores in all items ranged from 44 to 220, with the higher scores indicating better MiL.[20] The English version of the questionnaire was administered in accordance with the recommendations in published guidelines. Two independent forward translations by native English speakers fluent in Persian led to the first English consensus version, and two

independent backward translations of the consensus English version were prepared by bilingual native Persian speakers with a university degree in English who had no access to the original Persian version. These Persian backward translations were reviewed by the authors to ensure the accuracy and fluency of the Persian version of the instrument and was revised accordingly. The content and face validity of the instrument were confirmed by a panel of experts consisting of 15 faculty members of Tabriz University of Medical Sciences (9 with M.S. in nursing, 4 with Ph.D. in nursing and 2 with hematology-oncology subspecialty). Some minor changes were applied according to expert recommendations. The final version of the instrument was piloted on 40 patients with cancer and their family members for which Cronbach alpha was calculated as 0.87 and 0.9. One of the researchers constantly visited the hospitals inpatient wards and clinics during the study, trying to identified eligible participants. He, then distributed the questionnaire among the participants, instructed them to respond to the questionnaire in a private environment and return it after completing it.

The study was approved by the Institutional Review Board (IRB) and the regional Ethics Research Committee (ERC) of Tabriz University of Medical Sciences (No: 5/4/1822). Moreover, permissions were obtained from the officials and managers of the university hospitals and hospitals wards. The objectives of the study were explained to the participants and all of them signed an informed consent form before the questionnaires were handed out. The questionnaires were anonymous and the respondents were assured of the confidentiality of their responses.

Data were analyzed, using descriptive statistics (including frequency, percent, mean, and standard deviation) and inferential statistics, including student's t-test and Analysis of variance (ANOVA) by IBM SPSS software (version 13; SPSS, Chicago, IL). P-value lower than 0.05 was considered as statistically significant.

Results

The mean age of the participants was 45.48 (11.23) years. The majority of participants were married and their income were less than their expenses. Also, 55% of the participants were women (Table 1). The results showed a significant difference between the patients with cancer 119 (16.92) and their family members 146.2 (17.07) in terms of the mean scores of MiL (P<0.001). Different dimensions of MiL and their comparison between patients with cancer and their family members are presented in Table 2. Moreover, the women in both groups had lower mean scores than men; as for the marital status, married individuals had the highest mean scores, with the widows/ widowers having the lowest mean score. With regard to financial status, the meaning of life scores seemed to be improving as the household income increased. However, no significant differences were observed with regard to the participants' occupational status while the governmental staff had a better mean score in both groups (Table 3).

Table 1. Demographic characteristics of the participants

Variable	Patients N (%)	Family members N (%)
Gender		
Female	109 (54.5)	111 (55.5)
Male	91 (45.5)	89 (44.5)
Marital status		
Single	34 (17)	14 (7)
Married	156 (78)	180 (90)
Divorced/separated	10 (5)	2 (1)
Widowed/widower	-	4 (2)
Education		
Illiterate	26 (13)	16 (8)
Primary	38 (19)	31 (15.5)
Elementary	61 (30.5)	36 (18)
High school/diploma	46 (23)	75 (37.5)
University education	29 (14.5)	42 (21)
Occupational status		
Self-employed	66 (33)	62 (31)
Handworker	30 (15)	19 (9.5)
Governmental staff	30 (15)	22 (11)
Housewife	74 (37)	97 (48.5)
Place of living		
City	148 (74)	166 (83)
Village	52 (26)	34 (17)
Financial status		
Income more than expense	14 (20)	12 (40.5)
Income less than expense	146 (73)	107 (53.5)
Income equal to expense	40 (10)	81 (6)
Type of cancer		
Blood	86 (43)	-
Gastro-intestinal	58 (29)	-
Breast	5 (2.5)	-
Lung and bronchus	23 (11.5)	-
Others	28 (14)	-
History of chemotherapy		
Yes	193 (96.5)	-
No	7 (3.5)	-
History of radiotherapy		
Yes	14 (7)	-
No	186 (93)	-
Age (years)[*]	47.3 (11.7)	43.5 (10.8)
Time passed since awareness of diagnosis (months)[*]	4.3 (0.6)	4.7 (0.5)

[*]Mean (Standard Deviation)

Table 2. Comparison of MiL between patients with cancer and their family members

Dimensions of mil	No. of items	Range of score	Participants' group		P-value
			Mean (SD)$^\alpha$	Mean (SD)$^\beta$	
Freedom versus restriction	10	10-50	26.64 (7.29)	28.57 (5.73)	0.002
Appreciation of life	5	5-25	13.09 (3.17)	14.54 (2.84)	0.01
Contentment	8	8-40	20.37 (4.71)	23.49 (4.43)	0.001
Resentment	13	13-65	37.21 (8.68)	39.94 (7.11)	0.02
Social integration	8	8-40	14.11 (4.54)	15.38 (4.85)	0.007
Total	44	44-220	111.99 (15.58)	146.2 (14.99)	0.001

$^\alpha$Patients Mean (SD), $^\beta$Family members Mean (SD)

Table 3. Comparison of MiL of the participants based on some of their demographic characteristics

Variable	Mean (SD)	P-value
Gender		
Patients with cancer		
Female	102.5 (18.2)	0.002
Male	112.4 (16.1)	
Family members		
Female	126.1 (15.3)	0.001
Male	157.4 (15.1)	
Occupational status		
Patients with cancer		
Self-employed	119.2 (16.1)	0.098
Handworker	98.5 (14.5)	
Governmental staff	124.4 (13.3)	
Housewife	121.7 (17.4)	
Family members		
Self-employed	118.5 (15.5)	0.102
Handworker	111.5 (35)	
Governmental staff	117.7 (18.2)	
Housewife	128.3 (14.1)	
Marital status		
Patients with cancer		
Single	121.2 (17.3)	0.032
Married	128.6 (19.2)	
Divorced	124.5 (18.1)	
Widow\widower	119.7 (17.1)	
Family members		
Single	121.5 (18.2)	0.041
Married	132.4 (19.5)	
Divorced	126.8 (18.4)	
Widow\widower	108.9 (17.1)	
Financial status		
Patients with cancer		
Income more than expense	142.5 (17.6)	0.001
Income less than expense	102.3 (16.5)	
Income equal to expense	114.3 (18.3)	
Family members		
Income more than expense	154.7 (17.4)	0.001
Income less than expense	100.3 (17.9)	
Income equal to expense	116.2 (16.62)	

Discussion

Based on the extensive literature review conduced, this is, to the best of our knowledge, one of the first studies investigating MiL among Iranian patients with cancer and their family members. The study findings showed a significant difference between the patients and their family members in terms of the level of MiL and it also showed that the family members had better MiL than the patients themselves. This finding is consistent with a Turkish study indicating that there was loss of MiL in Turkish patients with cancer and that they tended to be undecided, with a low motivation to find meaning and purpose in life.[16] Differently, an earlier study in eastern Pennsylvania reported that MiL of patients with cancer were higher.[21]

It may not unfounded to assume that the patients' MiL depends on the country and culture one is reared in when they confront with cancer may prompt changes in one's view of meaning, causing individuals to question the previously held beliefs about the benevolence of the world, and the extent to which individuals deserve the events that befall them, and the extent to which individuals are able to control negative events. Moreover, patients facing cancer tend to search for a meaning in the experience that appears to moderate cultural influences on the presence of meaning in an attempt to make it fit the existing beliefs or to revise the beliefs to better match the experience.

Therefore, the findings of this study highlighted the importance of the existing evidence.[14,22,23]

Also, the role of the family members is often overwhelming and can be a physically demanding and emotionally draining experience that threatens their sense of MiL that directly affects their ability to endure new responsibilities and adjust to living with constant uncertainty. So, not only the patients with cancer but also their family members need adequate assistance from healthcare professionals and various support services to meet their demanding duties with minimal impact on their own health and well-being. On the other hand, improving healthcare professionals' understanding of the extent, nature and contributing factors of MiL about family members of patients with cancer and their unmet needs is fundamental to the development of effective family-focused clinical interventions.[24,25]

The results of the present study showed significant differences in MiL of the participants in terms of gender (women had lower level of MiL than men), marital status (married individuals had the highest level of MiL) and financial status (level of MiL seemed to be improving with the increase in household income level). However, no significant differences were shown regarding the participants' occupational status. In contrast, Eric found that the gender of the patients with cancer had no influence on the MiL.[16] Additionally, an earlier study conducted on the Hungarian population by Skrabski et al. determined that MiL was relatively uncorrelated to gender.[26] Findings of Another recent study carried out by Tomas-Sabado et al., examined the possible influence of gender on MiL in patients with advanced cancer from Barcelona, Spain and found no significant differences.[10] This finding is consistent with those of previous studies in which, despite the differences in the coping strategies adopted by men and women, the gender did not seem to intervene with the final perception of MiL.[27,28] Thus, what this reminds one, is the common perception that such studies probably failed to demonstrate such a difference and that there might be a need for more studies regarding the predictors of MiL among patients with cancer and their family members.

The results of present study were also congruent with a recent study by Garland et al., indicating that the presence of meaning was significantly associated with having a spouse (to be married/partnered), a finding that was corroborated by much of the current literature.[29,30] Similar to our findings, Afrooz et al., reported that patients with cancer with better social supports, including married patients, have higher levels of hope.[31] Therefore, we can conclude from these results

that social support is an important factor in inspiring meaning in patients with cancer and their family members' lives.

According to the study findings, the majority of the patients with cancer and their family members had financial conditions of "an income level lower than their living expenses" and "income level equal to their living expenses". The results also revealed the significant effect of financial status of the patients' household on the level of MiL, which is in line with a recent study by Fathollahzade et al., who found that most of Iranian patients with cancer had moderate to high levels of financial distress and their financial distress increased with the decrease in their incomes.[32] Accordingly, a previous German study carried out by Fegg et al., evaluated MiL in palliative care patients and found fairly higher satisfaction in those with sufficient financial status.[33] It is obvious that the process of cancer diagnosis/treatment, apart from the financial burden on healthcare systems, cause lots of financial difficulties for the patients and their family members that can negatively influence their MiL. Therefore, the healthcare systems' officials would benefit from taking proper actions in this area.

Despite the strength of this study, it also has certain limitations. First, a convenience sample of patients with cancer and their family members admitted to two university hospitals in Tabriz and Ardebil provinces, Iran, cannot represent the overall state of MiL among all Iranian patients with cancer and their family members. Next, in some cases, patients might not have disclosed their real MiL and described it to be worse than it really was. However, we tried to deal with this limitation largely by explaining the objectives of the study and debriefing the measures taken to the study participants if required. Despite these limitations, however, we believe that the findings may reasonably be interpreted in terms of cultural differences between the countries concerned.

Therefore, it is recommended that further studies be carried out to evaluate different aspects of MiL, its predictors and how it can aid healthcare professionals to better identify MiL and its contributing factors in patients with cancer and their family members with a large enough sample size at different regions of Iran and diverse populations in different cultures of world. The MiL should be studied in various forms of cancer to determine whether it will be changed throughout the process of diagnosis, during treatment, following treatment, and during advanced stages of cancer.

Conclusion

The findings of this study revealed: (a) lower levels of MiL among family members of patients with cancer as they struggled to find meaning and hope in their relatives' diagnoses; (b) the predictive effects of demographic and disease/treatment characteristics (such as gender, marital status, financial status); and (c) certain cultural differences. This requires special considerations of Iranian healthcare system regarding the related areas of this issue. Also, providing supplementary insurance coverage for cancer treatments and introducing patients to related charities through the healthcare administrative can be helpful. Therefore, given the importance of MiL for patients with cancer and their families' well-being, it should be taken into account when drawing up specific care plans whose aim is to help patients achieve the maximum possible comfort and quality of life. The results obtained here, add to the growing body of oncology nursing literature and should be taken into consideration in clinical practice and future research in the related areas of this issue. A comprehensive understanding of MiL, guides healthcare professionals in facilitation of patients with cancer and their families in expressing and processing their psychological state, provision of holistic care and to-the-point counseling referrals which might help to alleviate physical, mental, and emotional health consequences. Also, being aware that MiL may be related to demographic and disease/treatment characteristics, assessment approach should be modified

considering MiL and determination of a potential source of meaning for individuals.

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Ethical issues

None to be declared.

Conflict of interest

The authors declare no conflict of interest in this study.

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